REMARKS/ARGUMENTS

The Invention

The invention relates to graphical presentation of contig-component relationships, genomics, and gene discovery.

Status of the Claims

Claims 1-28 are cancelled.

Claims 29-36 are newly added.

Support for newly added claims 29-36

New claim 29 finds support in the specification at paragraph [0056] and [0077] wherein it is recited that: "Since contigs patterned as simple intersections between libraries may not adequately explain contig-component relationships, other algorithm settings can be used. Following are a few case studies representing a range of applications." Further support is found *e.g.*, in paragraph [0087], wherein it is recited that: "contig-component relationships may be displayed to relate clustering, or scattering". No new matter is added.

New claim 29 a. finds support in original claim 9 a., wherein it is recited: "a. providing a plurality of EST libraries". New claim 29 a. finds further support in paragraph [0038] wherein it is recited that: "*One embodiment* of the invention, called the Contig Constellation Viewer (CCV), *is for use in the study of EST data.* It is an analytical tool that permits the visualization and manipulation of *data variables related to cDNA libraries* and *their contributions toward assembled contigs.*" (emphasis added). And in paragraph [0005] wherein it is recited that: "Research into gene discovery... often focuses on ESTs which in general reflect the diversity of gene expression in living organisms." And in paragraph [0006] wherein, referring to the ESTs of paragraph [0005], it is recited that: "sequences result... in pools of EST data (Adams et al., 1992, Sequence Identification of 2375 Human Brain Genes, Nature 355:632-34). Such methods mean that a given set of sequences, often called a "library", shares a common origin..." No new matter is added.

New claim 29 b. finds support in amended claim 9 c. *see* response of record, dated March 16, 2007, wherein it is recited: "providing a multi-dimensional display comprising a

circular figure having loci distributed about the periphery thereof, wherein each locus is associated with one of said libraries". And in the specification at paragraph [0040] wherein it is recited: "The CCV application presented here permits a global visualization of library data... using a multi-dimensional display. It can be... queried... permitting... the inference of relatedness between and among the *source libraries providing the data clusters*..." (emphasis added). No new matter is added.

New claim 29 c. finds support in the specification at paragraph [0008], which recites: "to remove redundancy from within an EST data set, sequences can be aligned and clustered using various assembly algorithms..." And in the specification at paragraph [0027], which recites: "CONTIG is a data point which represents a consensus string created from comparing subset sequence data using assembly algorithm programs." New claim 29 c. also finds support in the specification at paragraph [0028] which recites: " "Assembly" is the process used to build contigs." No new matter is added.

New claim 29 d. finds support in amended claim 9 d. *see* response of record, dated March 16, 2007, wherein it is recited: "plotting a symbol for each contig within the multidimensional display based on a set of coordinates within said multi-dimensional display, wherein each symbol is disposed within the figure at a point within an area between the loci associated with the libraries which contributed to said contig." And throughout the specification, *e.g.*, at paragraph [0066] wherein it is recited: "The relative (plotting) position of the data clusters is a statistical exercise, in essence using sorting and comparing algorithms to determine degree of relatedness between and among source libraries. The plotting of each symbol within the multidimensional figure is based on a set of coordinates within said multi-dimensional display, wherein said coordinates are a function of a specific comparative analysis applied to said data libraries, namely, the "equal," "proportional," and "weighted" algorithms disclosed herein." The manner in which the "equal," "proportional," and "weighted" algorithms influence positioning of a symbol within a multi-dimensional display are discussed in paragraphs [0072] – [0074]. No new matter is added.

New claim 30 finds support in original claim 10. Further support is found in the specification at paragraph [0072]. No new matter is added.

New claim 31 finds support in original claim 11. Further support is found in the specification at paragraph [0073]. No new matter is added.

New claim 32 finds support in original claim 12. Further support is found in the specification at paragraph [0074]. No new matter is added.

New claim 33 finds support in original claim 15. Further support is found in the specification at paragraphs [0078], [0079], [0081] and [0084]. No new matter is added.

New claim 34 finds support in the specification at paragraphs [0022] and [0083]. No new matter is added.

New claim 35 finds support in original claim 14. Further support is found in the specification at paragraph [0054]. No new matter is added.

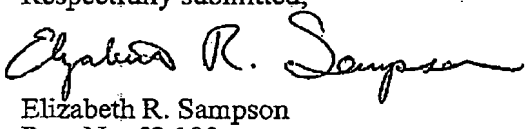
New claim 36 finds support in original claim 16. Further support is found in the specification as recited above for new claim 29, a-d. No new matter is added.

CONCLUSION

In order to claim the invention more particularly, Applicants respectfully submit claims 29-36 for continued examination. Applicants believe all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 510-559-6066.

Respectfully submitted,



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